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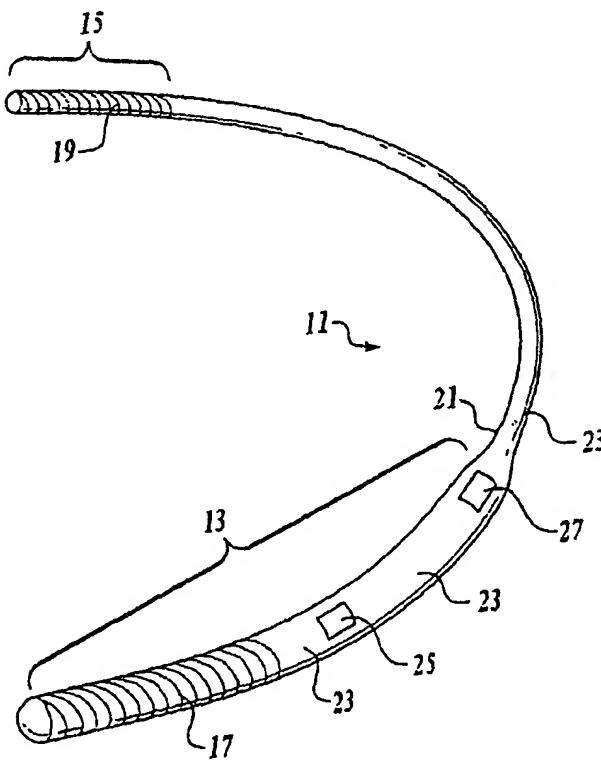
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[Continued on next page]

(54) Title: UNITARY SUBCUTANEOUS ONLY IMPLANTABLE CARDIOVERTER-DEBRIBILLATOR AND OPTIONAL PACER



WO 02/24275 A3



(57) Abstract: A unitary subcutaneous implantable cardioverter-defibrillator is disclosed which has a long thin housing in the shape of a patient's rib. The housing contains a source of electrical energy, a capacitor, and operational circuitry that senses the presence of potentially fatal heart rhythms. Provided on the housing are cardioversion/defibrillation electrodes located to deliver electrical cardioversion-defibrillation energy when the operational circuitry senses a potentially fatal heart rhythm. The unitary subcutaneous implantable cardioverter-defibrillator does not have a transvenous, intracardiac, epicardial, or subcutaneous electrode.

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patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR). OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

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INTERNATIONAL SEARCH REPORT

International Application No

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A. CLASSIFICATION OF SUBJECT MATTER
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B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
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Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 5 385 574 A (HAUSER ROBERT G ET AL) 31 January 1995 (1995-01-31) the whole document ---	1,35,69, 85,96, 102,103, 105-108
A	US 4 157 720 A (GREATBATCH WILSON) 12 June 1979 (1979-06-12) the whole document ---	1,35,69, 85,96, 102,103, 105-108
A	EP 0 627 237 A (TRABUCCO HECTOR OSVALDO ;GAVRIELIDES JORDAN (DE)) 7 December 1994 (1994-12-07) the whole document ---	1,35,69, 85,96, 102,103, 105-108
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Patent family members are listed in annex.

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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 5 331 966 A (BENNETT TOM D ET AL) 26 July 1994 (1994-07-26) the whole document ---	1,35,69, 85,96, 102,103, 105-108
Y	WO 99 53991 A (ALZA CORP) 28 October 1999 (1999-10-28) the whole document ---	113
Y	US 6 093 173 A (BALCETA JOBERT P ET AL) 25 July 2000 (2000-07-25) the whole document ---	113
A	WO 97 29802 A (LOEB GERALD E ;RICHMOND FRANCES J R (CA); ADVANCED BIONICS CORP (U) 21 August 1997 (1997-08-21) the whole document ---	113

FURTHER INFORMATION CONTINUED FROM PCT/SA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. Claims: 1-31,35-108

unitary subcutaneous implantable cardioverter-defibrillator

2. Claim : 113

apparatus for implanting an implantable
cardioverter-defibrillator

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

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Patent document cited in search report	Publication date	Patent family member(s)		Publication date
US 5385574	A 31-01-1995	US 5133353 A		28-07-1992
		AT 168024 T		15-07-1998
		AU 641224 B2		16-09-1993
		AU 7354591 A		07-11-1991
		CA 2040800 A1		26-10-1991
		DE 69129716 D1		13-08-1998
		DE 69129716 T2		24-12-1998
		DK 453761 T3		19-04-1999
		EP 0453761 A1		30-10-1991
		ES 2120411 T3		01-11-1998
		JP 5064666 A		19-03-1993
		US 6157860 A		05-12-2000
		US 5713926 A		03-02-1998
		US 6280462 B1		28-08-2001
		US 5916238 A		29-06-1999
US 4157720	A 12-06-1979	AU 521296 B2		25-03-1982
		AU 3986278 A		20-03-1980
		CA 1120548 A1		23-03-1982
		DE 2840307 A1		29-03-1979
		FR 2403075 A1		13-04-1979
		GB 2004188 A ,B		28-03-1979
		IL 55526 A		31-03-1981
		JP 54060791 A		16-05-1979
		MX 146747 A		05-08-1982
		NL 7809422 A		20-03-1979
		SE 7809645 A		17-03-1979
EP 0627237	A 07-12-1994	US 5243977 A		14-09-1993
		EP 0627237 A1		07-12-1994
US 5331966	A 26-07-1994	AU 654552 B2		10-11-1994
		AU 1750692 A		02-11-1992
		CA 2106378 A1		06-10-1992
		DE 69210395 D1		05-06-1996
		DE 69210395 T2		09-01-1997
		EP 0578748 A1		19-01-1994
		JP 2655204 B2		17-09-1997
		JP 6505662 T		30-06-1994
		WO 9217240 A1		15-10-1992
WO 9953991	A 28-10-1999	AU 3748899 A		08-11-1999
		TW 442273 B		23-06-2001
		WO 9953991 A1		28-10-1999
US 6093173	A 25-07-2000	NONE		
WO 9729802	A 21-08-1997	WO 9729802 A2		21-08-1997
		US 6185455 B1		06-02-2001
		US 6214032 B1		10-04-2001
		US 6051017 A		18-04-2000